Food Spending Varies Across the United States

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Food helps to define the culture and identity of many nations. Diets have been shaped over hundreds or even thousands of years by the local culture, climate, and the plants and animals available in particular countries or regions of the world. French, Mexican, Italian, and Chinese foods evolved independently and are easily identified by their unique characteristics. Since the United States is relatively young and comprised almost entirely of immigrants, the American food genre is comparably nondescript. To the outside world, fast food and soft drinks might best characterize the U.S. diet. However, the diversity that characterizes our population is also reflected in our food consumption patterns, which are both dynamic over time and heterogeneous across regions.

Food consumption patterns within the United States vary in part because of ancestral patterns of land settlement. For example, the Southern diet has been heavily influenced by African-American and French traditions, diets in the Southwest often have a strong Mexican flair, and food consumption patterns in certain parts of the Northeast and upper Midwest draw on Eastern European traditions.

Income is also an important factor in determining the types of foods consumed. This is certainly recognized when comparing diets across different countries. Even within the United States, income variation across regions can translate into noticeable differences in diet.

States Differ in Spending on Food Both at Home and Away

That U.S. diets vary regionally becomes immediately apparent when comparing the level of per capita food expenditures across States. Based on the most recent State-level data from the U.S. Census of Retail Trade (1992; corresponding data from the 1997 Census is scheduled to be released in the second quarter of 2000), per capita expenditures on food purchased from supermarkets and other grocery retailers (food at home) averaged about $1,526 a year, while expenditures at restaurants and at fast food outlets (food away from home) were $348 and $316, respectively, for a total of $2,190.

But there are large deviations from these averages. In the continental United States, residents in New Hampshire spent the most for food. Their 1992 expenditures on food at home equaled $2,171 per capita, with an additional $458 spent at restaurants and another $254 at fast food outlets, bringing the total to $2,883—about 32 percent above the U.S. average. At the other extreme, Mississippi residents spent a combined total of only $1,750 per capita in 1992: $1,330 on food at home, and $143 and $277 at restaurants and fast food outlets, respectively. The residents of Mississippi spent about 9 percent more on fast food than did New Hampshire residents, while expenditures at table-service restaurants—which are often associated with high incomes—were almost 78 percent higher in New Hampshire than in Mississippi.

Income growth is often cited as a key factor in explaining dietary changes over time. Studies have shown that as incomes increase, consumers increase their expenditures on more expensive fresh foods, more processed food, and more meals eaten out. The same effect is evident across regions at a single point in time. In 1992, per capita income in New Hampshire was more than 65 percent higher than in Mississippi, and the much higher expenditures at restaurants likely reflect this difference. For many consumers, fast food is viewed more as a necessity than a luxury, hence the lower expenditures in high-income New Hampshire.

Income also affects the types of foods purchased from grocery

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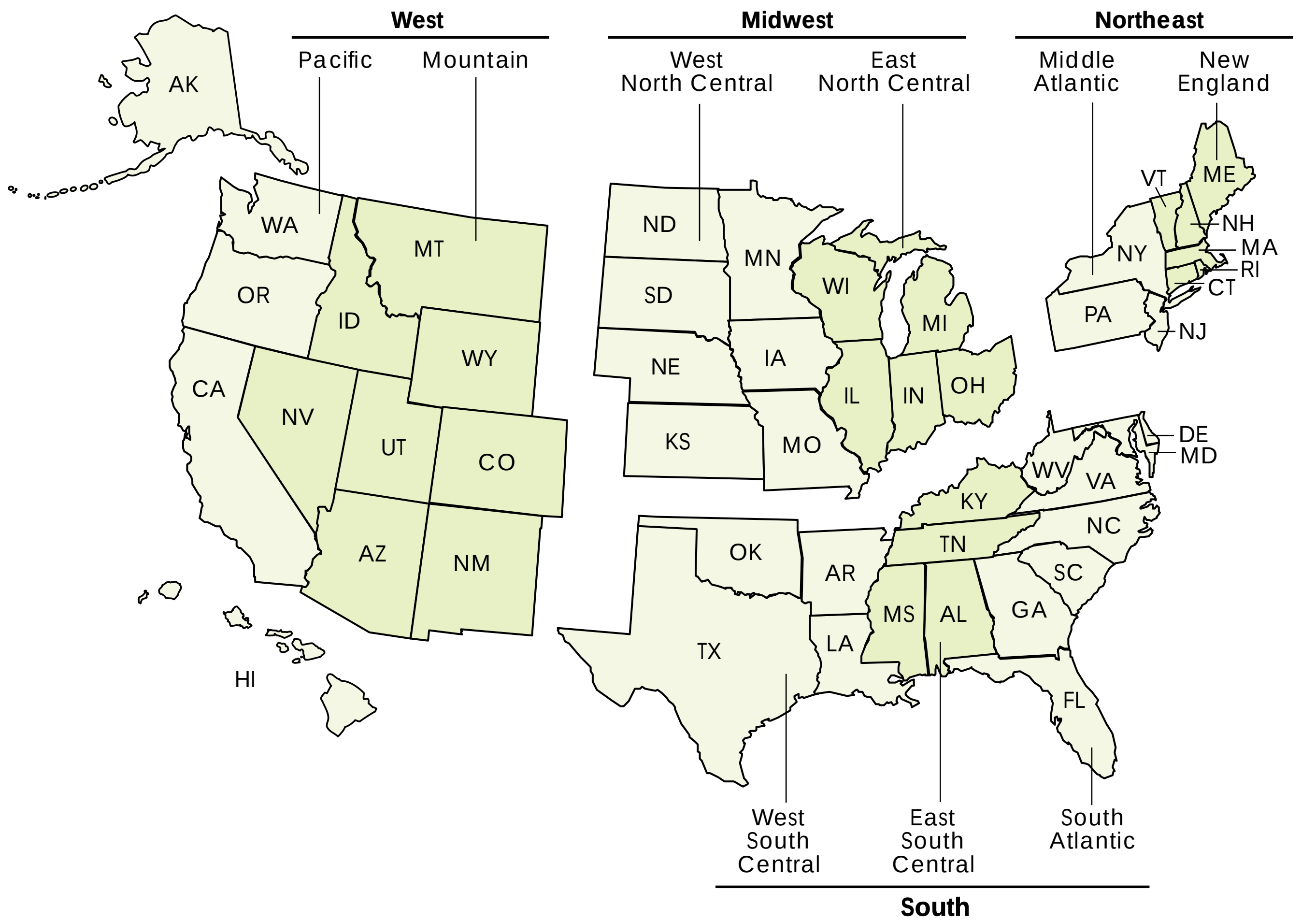
stores. In developed nations like the United States, the total quantity of food consumed is unlikely to increase appreciably with income. Therefore, the above-average expenditures on food at home in a high-income State like New Hampshire almost certainly reflect purchases of more expensive foods—fresh tuna versus canned, T-bone steak versus hamburger, and imported natural cheese versus Cheese-Whiz, perhaps.

Factors such as differences in culture and climate serve to create regional differences that can span State boundaries. Thus, the South is often identified as a unique U.S. region, as is the West Coast or New England. The U.S. Census Department divides the United States into nine geographic divisions, which can be further aggregated into four regions: Northeast, Midwest, South, and West (fig. 1). These broad regions display differences in food expenditure patterns.

The Midwest appears to be the most frugal when it comes to food expenditures (table 1). Consumers in this region spend about 12 percent less on food at home than the U.S. average, and almost $100 per capita below consumers living in the South, the region with the next lowest food expenditures. Midwest consumers also economize on food away from home, with restaurant expenditures among the lowest in the Nation and fast food expenditures below the U.S. average. Only the Northeast spends less on fast food. Incomes in the Midwest are only slightly below the U.S. average, which emphasizes that income is only one of possibly many factors that affect expenditures.

Consumers in the Northeast and the West spend similar amounts on food at home, with spending in both about equally above the U.S.

Figure 1
Map of the United States Showing Census Divisions and Regions



Source: U.S. Bureau of the Census.

average. However, spending in the Northeast varies substantially; New England residents spend nearly 14 percent more on food at home than do residents of the Middle Atlantic States. In the West, the difference in expenditures between the Pacific and Mountain divisions is only about 3.5 percent. The Midwest and South also exhibit little within-region variation in food-at-home expenditures.

In terms of food away from home, the West leads the Nation in expenditures, driven by high restaurant and fast food expenditures in the Pacific division. Restaurant expenditures in New England are second only to the Pacific, while New England's fast food spending is the lowest in the United States. The highest fast food expenditures are found across the Southern divisions, but expenditures in the Pacific and East North Central divisions also exceed the U.S. average.

New England's relatively low fast food expenditures might indicate that fast food firms target lower income areas for expansion (per capita income in New England is about 16 percent above the national average). Another possible explanation is the propensity for consumers to travel by automobile. Fast food, with its heavy emphasis on take-out sales—often sold through drive-through windows, and the frequent placement of fast food outlets along highways—is clearly targeted towards the automobile user. According to the Federal Highway Administration, in 1995, annual miles of vehicle travel per capita in the 6 New England States averaged 8,439, somewhat below the national average of 9,202. In the South Atlantic, where fast food sales are the highest, vehicle miles traveled were 10,149 per capita.

Grocery Purchases Vary by Region

The largest variation in food expenditures across regions involves food at home. We used 1990 retail sales data for branded grocery products in 54 separate U.S. markets to examine how the relative expenditures on various grocery items vary across U.S. regions. For ease of presentation, we aggregate these 54 markets into the four aggregate regions defined by the Census: the Northeast, Midwest, South, and West. We focus on grocery categories with over $100 million in sales. The data do not cover fresh products such as produce and meats, but only include packaged grocery items (branded and store brands) sold through central warehouses.

The numbers in table 2 report the 10 grocery categories that have the highest sales in each region relative to the national average, reported as a percentage. For instance, sales of iced tea mixes in the Northeast are 2.06 times higher than the U.S. average for this category. Clearly, sales of certain grocery items vary considerably by region. The South stands

Table 1
Average Food Expenditures Vary With Income and Across Regions, 1992

Region	Expenditures: Food at home	Restaurant	Fast food	Total[1]	Per capita income
	Dollars per capita				
U.S. average	1,526	348	316	2,190	20,137
Northeast	1,697	391	248	2,336	23,417
New England	1,783	417	243	2,443	23,398
Middle Atlantic	1,569	350	257	2,176	23,424
Midwest	1,340	306	309	1,955	19,626
East North Central	1,324	317	323	1,964	19,834
West North Central	1,351	298	300	1,949	19,133
South	1,437	304	343	2,084	18,343
South Atlantic	1,466	381	349	2,196	19,465
East South Central	1,402	220	348	1,970	16,447
West South Central	1,412	235	327	1,974	17,575
West	1,622	375	322	2,319	20,525
Mountain	1,637	358	318	2,313	18,891
Pacific	1,580	422	331	2,333	21,381

[1]Total of food at home, restaurant, and fast food only. Excludes hotels/motels, concessions stands, military feeding, and other minor categories.
Source: Census of Retail Trade.

out as a region where purchases of processed meats, cornmeal, and shortening are much higher than the U.S. average. The West exhibits above-average grocery purchases of many fruit juices and Mexican foods, the latter reflecting the large Mexican-American population. Midwest consumers purchase above-average quantities of many items used for baking, such as pie filling, baking chocolate, brown sugar, and marshmallows. This suggests an above-average tendency for home cooking, which is consistent with the data that report lower overall food expenditures in this region (table 1).

The Northeast is the region with the highest income. Many of the items with above-average purchases in this region could be labeled as discretionary, such as chewing gum, seltzers, and butter (as opposed to margarine, which tends to be much

Since the United States is relatively young and is composed of many types of immigrants, no overarching American food genre exists. Americans' diets vary across the country, often based on prominent local ethnicities. In the Southwest, for example, many foods are heavily influenced by Mexican favorites.

Credit: PhotoDisc

Table 2
Regional Differences Show Up in Grocery Sales

Region and item	Household expenditures relative to the U.S. average	Region and item	Household expenditures relative to the U.S. average
Northeast:	*Percent*	West:	*Percent*
Iced tea mixes	206	Ripe olives	223
Frozen meat	199	Frozen apple juice	215
Chewing gum	165	Frozen Mexican dinners	211
Butter	164	Refrigerated Mexican foods	211
Shelf-stable blended juice	157	Canned chilli	203
Frozen green beans	156	Peppers (pickled)	199
Seltzers/club soda	155	Frozen lemon aid	195
Frozen dinner bread/rolls	155	Frozen grape juice	193
Miscellaneous frozen dishes	154	Miscellaneous frozen juices	188
Canned ham and meats	153	Nonchocolate candy bars	184
South:	*Percent*	Midwest:	*Percent*
Cornmeal	248	Shelf-stable tomato juice	166
Canned sausage	243	Spoonable salad dressings	164
Refrigerated biscuits	232	Canned pie filling	148
Southern-style frozen vegetables	224	Baking chocolate	145
Solid shortening	169	Potato chips	142
Shelf-stable orange juice	164	Brown sugar	138
Breakfast sausage	164	Frozen hors d'oeuvres	137
Dinner sausage	160	Marshmallows	136
Canned peas	158	Canned mushrooms	134
Frozen pastry	154	Refrigerated Mexican foods	131

Source: Compiled from data collected by Selling Area Marketing Incorporated (SAMI), 1990.

less expensive). Many frozen dishes are also consumed in above-average quantities in this region. Together, this suggests that higher average incomes lead to greater purchases of discretionary items and convenience foods.

Income Affects the Type of Grocery Purchases...

Incomes vary significantly in the 54 regional markets for which grocery sales are reported. Making use of this fact, we can examine how grocery expenditures in the high-income markets differ from those in the low-income markets, independent of regional effects. A nationally representative "snapshot" of expenditures in low-income markets is developed by averaging the expenditure patterns of the lowest income cities in each of the four regions. These four low-income cities are Scranton, Pennsylvania; Charleston, West Virginia (a market that includes much of Ohio); Shreveport, Louisiana; and El Paso, Texas, from the Northeast, Midwest, South, and West, respectively. The same technique provides a snapshot of expenditures in high-income markets. Here, the four high-income cities (one from each region) that are averaged are New York City, New York; Chicago, Illinois; Miami, Florida; and San Francisco, California.

To investigate how expenditure patterns differ between these representative high-income and low-income markets, an expenditure index is developed for each that reports how the sales of particular grocery categories for the two types of markets compare to the national average. Thus, we have one index for low-income markets and another for high-income markets for each grocery category. These indices are interpreted in the same manner as the numbers in table 2—that is, as the percentage difference from the U.S. average. Again, we focus on grocery categories with over $100 million in U.S. sales.

We find that grocery categories that are relatively important in high-income areas tend to be relatively unimportant in low-income markets, and vice-versa. The expenditure indices further reveal information about how expenditure patterns differ in high-income and low-income markets (table 3). To simplify our presentation, we focus on the 10 grocery categories that have the highest expenditure indices and the 10 with the lowest, in the high-income and the low-income markets.

The items in table 3 adhere to a pattern suggesting that income

Table 3
Expenditures on Many Grocery Products in High- and Low-Income Cities Vary From the U.S. Average

Items with above-average household expenditures relative to the U.S. average		Items with below-average household expenditures relative to the U.S. average	
Low-income cities[1]	*Percent*	Low-income cities[1]	*Percent*
Cornmeal*	242	Seltzers/club soda*	34
Canned sausage	192	Refrigerated salad dressing*	38
Solid shortening*	175	Bottled water*	41
Canned lunch meat	162	Miscellaneous refrigerated juices*	43
Flour	155	Deluxe frozen vegetables	44
Ground pepper	141	Frozen green beans*	47
Evaporated condensed milk	138	Frozen fish dishes	48
Refrigerated biscuits*	132	Frozen Italian dishes	51
Low-calorie soft drinks	131	Refrigerated yogurt*	52
Canned pie filling*	128	Refrigerated Mexican foods	53
High-income cities[2]	*Percent*	High-income cities[2]	*Percent*
Seltzers/club soda*	197	Solid shortening*	48
Miscellaneous Refrigerated juices*	171	Canned meat stew	56
Bottled water	171	Canned pie filling*	56
Refrigerated orange juice	160	Refrigerated biscuits*	57
Refrigerated drinks	155	Spoonable salad dressing	60
Frozen green beans*	154	Cornmeal*	61
Dried rice	152	Canned green beans	68
Refrigerated yogurt*	147	Dry toaster items	68
Butter	147	Refrigerated pastries	69
Refrigerated salad dressing*	142	Canned poultry	69

[1]Representative low-income cities are: Scranton, Pennsylvania; Charleston, West Virginia; Shreveport, Louisiana; and El Paso, Texas.
[2]Representative high-income cities are: New York City, New York; Chicago, Illinois; Miami, Florida; and San Francisco, California.
*Items that have both the lowest (highest) indices for high-income regions, and the highest (lowest) indices for low-income regions.
Source: Compiled from data collected by Selling Area Marketing Incorporated (SAMI), 1990.

plays an important role in explaining consumption patterns across regions. Many of the products for which spending is above average (having indices greater than 100) in the high-income markets can be considered high value or discretionary, with the low-income markets showing above-average spending on more basic, staple goods and goods that require additional home preparation. Expenditures on many refrigerated and frozen products are above average in the high-income markets but below average in the low-income markets.

Above-average spending on flour, cornmeal, and shortening in low-income markets suggests a greater tendency toward baking at home and preparing meals from scratch. In contrast, cornmeal and solid shortening expenditures are both well below average in the high-income regions. The expenditure index for flour in the high-income markets, though not among the bottom 10, is below the U.S. average with an index of 77.

There is some evidence that diets, or at least grocery store purchases, in high-income markets are less calorie dense (table 3). Note the heavy emphasis on juices and frozen vegetables in the high-income regions and the relatively low expenditures on high-fat items such as sausage and shortening. Low-income regions exhibit the opposite pattern: above-average grocery store expenditures on calorie-dense food items such as sausages and shortening and below-average expenditures on many of the vegetable items.

...and the Form

Income also strongly affects the form in which particular foods are purchased. Many foods on supermarket shelves are available in two or more ways. For example, pasta dishes can be purchased canned or frozen or as a quickly prepared dry dinner. Orange juice is available refrigerated or canned or as a frozen concentrate. Food forms differ in quality, with corresponding price differences. Much of the increase in food spending as income increases likely is not a change in what is eaten but is an improvement—in terms of taste, nutrition, quality, or convenience—in the form in which it is purchased. This sort of increased food spending involves little, if any, increase in use of farm commodities but rather an increase in intermediate inputs and labor.

As an example, we considered the choice between frozen and canned versions of four common vegetables: corn, green beans, peas, and spinach. Most consumers view frozen vegetables as better quality, but canned varieties are usually less expensive. For each of the 54 markets, we computed total expenditures on the frozen and canned versions of the 4 vegetables. Over the entire United States, frozen versions accounted for 34 percent of combined spending on canned and frozen corn, green beans, peas, and spinach. In the representative high-income markets discussed earlier, the frozen versions of these four vegetables accounted for 50 percent of total sales, but in the low-income markets the proportion was only 24 percent. Similar relationships were found for other types of foods.

Income variation and differences in culture and ethnic background are not the only factors contributing to regional differences in diet. Changes in diet and eating have also been brought about by changing lifestyles and new household structures. Much attention has been given to the increasing number of women in the work force and consequent rise in demand for convenience foods. This effect can be observed across the 54 markets used in our analysis.

In our set of 54 markets, female labor force participation varies from a low of 40 percent in Charleston, West Virginia, to 65 percent in Minneapolis, Minnesota. Eleven of the 25 grocery categories that are most positively associated with the female labor force participation rate are frozen foods. Many of the remainder are convenience items—prepared rice, yogurt, fruit and cereal bars. Of the 25 items with unusually low sales in markets with many working women, 8 are baking ingredients, including flour, sugar, yeast, and shortening. Frozen items are absent. The only “baking ingredient” among the top 25 foods most positively associated with working women is refrigerated bread dough.

Regional patterns in sociodemographic factors such as income and the female labor force participation rate, to the extent that they exist, will translate into perceptible differences in food purchasing patterns across those regions. In short, increasing market participation by household members, and rising incomes, have contributed to differences in the regional pattern of food purchasing as well as altering that for the Nation as a whole.

Changes in culture, income, and demographic characteristics of U.S. households tend to be studied closely to monitor their effect on dietary changes over time. But at even a single point in time, the surprising variation in these same factors across the United States leads to large differences in the types of foods consumed in different regions. Observing these regional differences is obviously important to marketers hoping to target products to specific types of consumers, but it is also important to researchers hoping to gain a better understanding of how economic and demographic factors affect food expenditures. ■